Medical Library

Vol. XLIII. No. 162. WINTER, 1926.

The Bristol Medico-Chirurgical Journal

PUBLISHED UNDER THE AUSPICES OF

THE BRISTOL MEDICO-CHIRURGICAL SOCIETY.

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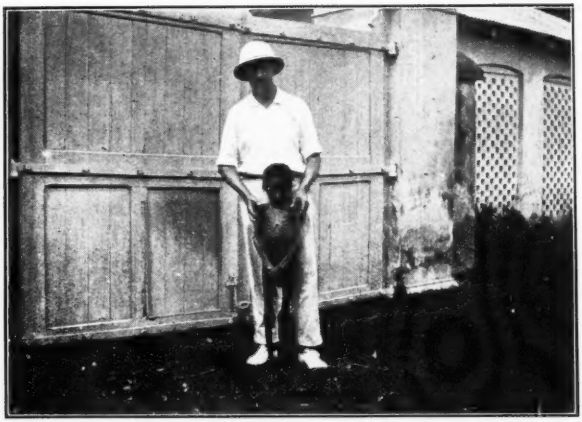

Kala azar: before treatment.

Kala azar: after two months' treatment

The Bristol Medico-Chirurgical Journal

"Scire est nescire, nisi id me
Scire alius sciret."

WINTER, 1926.

KALA AZAR.

NOTES ON THE DISEASE AND ITS TREATMENT.

BY

ERSKINE FARAKER, M.R.C.S., L.R.C.P.
(*Keinton Mandeville*),
Late Chief Medical Officer, Mission Hospital, Kalna, Burdwan, Bengal.

A FEW personal notes concerning a disease which may occasionally be met with in a shipping centre like Bristol may be of interest to some readers of this Journal.

To my mind there is scarcely a more dramatic proof of the advance of modern scientific medicine than the cure of this once dread disease.

I well remember that prior to the introduction of antimonial treatment we considered every case of kala azar practically hopeless—98 per cent. mortality. Now the majority of cases treated with antimony recover.

Dr. Erskine Faraker

Kala azar is endemic in the Madras Presidency, Bengal, Assam and Bihar.

I took charge of the Mission Hospital at Kalna, Burdwan, Bengal, from 1922–24, in the centre of the endemic area, where my predecessor, Dr. Ernest Muir, had done his brilliant pioneer work in the treatment of this disease. During the last year of this period I treated some 400 cases at the Out-patient Department, and had about 150 cases in hospital. (The hospital has 64 beds.)

Clinical Picture.

There is a marked wasting of the whole body, with the exception of the abdomen, which appears to enlarge as the rest of the body wastes, due to the steadily increasing size of the spleen and liver.

The hair becomes dry and scanty and falls out. The skin becomes shiny, acquires a darker hue in Indians, and appears to be tightly stretched over the bony parts. The darkening of the skin has led to the name "kala azar"—black fever—not to be confounded with black-water fever.

The large vessels in the neck throb from the low blood-pressure. The general appearance of any fairly advanced case of kala azar is typical, and is not likely to be mistaken for a case of malarial cachexia by anyone familiar with the two diseases.

The usual history is that a young adult or child (the ages most affected being three to thirty years) one and a half to three months after visiting an endemic area develops a fever often resembling typhoid in its initial ladder-like climb. The tongue, however, is clean, malaise is not marked and the mind is quite clear.

This initial fever of kala azar may resemble malaria, with sharp daily rigors, and a temperature running up to 103° or 104°.

After this initial flare-up, the fever often takes on a chronic low form for a few weeks, and then may show a rather striking peculiarity of the disease, namely a double rise of temperature, usually about 3.0 p.m. and at midnight.

In the early stages of the fever the unfortunate patient is usually drenched with quinine by his unsuspecting and well-meaning physician.

Untreated, the fever continues more or less all the time until death claims its victim in from three to twelve months.

Spleen.—This steadily increases in size as the disease lays hold of the patient. I have often seen cases where the abdomen is almost entirely filled by the enlarged spleen. After three months of the disease the spleen may be half-way down to the umbilicus, in six months at the umbilicus, in nine months almost down to the pubes. The acuter the disease the softer the spleen on palpation.

Leishman-Donovan bodies are usually found on spleen-puncture ; an operation not devoid of risk because the coagulability of blood is low in kala azar.

Liver.—This can nearly always be felt soft and sharp, perhaps two or three inches beneath the costal margin.

Leishman-Donovan bodies can be found in the liver on puncture, but not so easily as in the case of the spleen, though the risk of hemorrhage is less.

Blood.—Enthusiasts are, I believe, able to recover Leishman-Donovan bodies from the peripheral blood, but you need to be an enthusiast to achieve this. There is a very marked leucopenia, the white corpuscles being reduced to two or even one thousand. The deficiency is mainly due to a deficiency in polymorphonuclear leucocytes.

The coagulability of the blood is much decreased, so that bleeding from nose, gums, bowel and even stomach are very common. Petechiæ may occur in the skin.

The pulse is weak and rapid, the carotids pulsate, and the systolic blood-pressure may fall below 100 mm.

Respiratory System.—Owing to the defective defence offered by the polymorphs, inflammatory conditions of the lungs are very liable to occur, and death from broncho-pneumonia is one of the commonest terminations of the disease.

Digestive System.—The tongue is clean, the appetite quite good, but digestion is decidedly impaired. Diarrhœa and dysentery are very common. Needless to say, emetine is useless in dysentery due to kala azar.

In the final stages of the disease cancrum oris is very liable to occur and leads to death, from exhaustion in the majority of cases, but occasionally from hemorrhage. Still more rarely does spontaneous recovery take place from this most terrible complication. In such a case a leucocytosis occurs, and the result is not merely a checking of the facial necrosis, but a complete recovery from the disease. This happens in one or two per cent. of cases, the other 98 per cent. of cases being fatal if untreated.

Diagnosis.

My facilities for laboratory work at Kalna were primitive in 1922, and I had no trained assistant at the time, so that I did not carry out spleen puncture and blood stainings, but of all the hundreds of cases I saw and treated I do not think a case was missed by doing Napier's aldehyde test and checking with the clinical symptoms already described.

This test was performed on about 1,000 cases. It is extremely simple, and consists of withdrawing about

5 c.c. of blood from a vein, allowing it to stand for a few hours in a test-tube, pouring off the separated serum and adding one drop of commercial formalin to each cubic centimetre of serum so collected. Shake and allow to stand for twenty-four hours. In a few moments the serum becomes viscid and gradually sets into a whitish opaque solid mass, like the hard-boiled white of an egg, if the case be one of kala azar of three or four months' duration. If the case is of less than three months' duration the serum may form a clear jelly-like mass in twenty-four hours, yellow or greenish in colour. This may indicate an early case of kala azar, chronic malaria, phthisis, leprosy or (as in one of my cases) actinomycosis.

If the serum remains perfectly liquid after twenty-four hours, the case is negative as far as kala azar is concerned. It should be noted that the serum remains strongly positive for some months after the disease is really cured, and slides from spleen-puncture are negative. Six months after cure the blood should be negative.

The disease most likely to be confounded with kala azar is malaria, but kala azar can usually be diagnosed in its early stages by a process of exclusion —absence of malaria parasites, non-reaction to quinine, and marked reaction to antimony injections.

Treatment.

My routine treatment at Kalna was as follows:—

A two per cent. solution of sodium antimony tartrate in distilled water is boiled for five to ten minutes and 0·25 per cent. carbolic acid added if the solution is to be kept three or four days. It is, however, better made fresh as required.

This solution is injected intravenously three days

a week, the initial dose being 0·5 c.c. for an adult and 0·5 c.c. increase for each succeeding dose until 5 c.c. is reached, the dose being then kept at that maximum figure until the case is considered cured. No increase should be made if there are rigors, vomiting, dizziness, much rise of temperature, pains in joints, or severe coughing. Children stand relatively large doses well.

It is often by no means an easy business to give an intravenous injection to a frightened, dark-skinned, wasted youngster of five or six years of age, with a low blood-pressure, and I have found that the veins on the back of the hand in a child are often easier to get into than the median-basilic.

There are one or two points to note about the injection :—

1. A single drop of the solution outside the vein will excite the most severe cellulitis, causing untold difficulty, only overcome by large bribes of sweets to persuade a child to submit to further treatment.
2. The solution must be injected extremely slowly, otherwise coughing, vomiting and faintness will be excited.
3. The injection is best given with the patient lying down, though I admit that most of mine were treated in the squatting position.
4. No food should be allowed for several hours before the injection, in order to avoid vomiting.
5. There is often a rise of temperature after each injection at first, until the disease begins to be "brought under."

Duration of Treatment.—My working rule was, roughly, that the duration of treatment should be

proportionate to the time taken to bring down the fever, in the proportion of a week to a month, *e.g.* if the fever takes three weeks to come down to normal, then three months' treatment is indicated. In any case, no patient was discharged under two months, and one must take into consideration the amount of flesh put on, reduction of size of spleen, and absence of complications, etc.

Subsidiary Treatment.—Occasionally I used red oxide of mercury ointment to rub over the splenic area to excite leucocytosis, and also partly to please my patients, who hungered for "something to rub in." It seemed to me that I got as good results without the administration of painful irritants as with. Muir, however, is a great believer in intramuscular injections of creosote and turpentine "to excite leucocytosis." Digitalis is a useful drug to raise the blood-pressure, and was an ingredient in my stock iron and digitalis tonic.

I have tried other preparations of antimony intramuscularly in small children, but found them very painful, often causing abscesses. There have been scores of new preparations and remedies tried, but sodium antimony tartrate still holds the field. It is less toxic than potassium antimony tartrate, the first salt in use.

The Diet must be easily digested on account of liability to gastric disturbances.

The Complications. — Cancrum oris, dysentery, epistaxis, pneumonia, etc., must be treated symptomatically. Generally they call for a reduction of the dose of antimony for the time being, on account of the depressing effect of so powerful a remedy on an already badly debilitated subject, which might prove to be the "last straw."

The complications, on the other hand, if not too severe, may be actually helpful in producing a leucocytosis.

In conclusion, I must acknowledge my indebtedness to Dr. Ernest Muir, M.D., F.R.C.S., Leprosy Research Worker at the School of Tropical Medicine, from whom I have received much valuable help at various times in India in the study of kala azar.

THE TREATMENT OF LACHRYMAL OBSTRUCTION.[1]

BY

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In bringing forward this subject for discussion I have been guided by the fact that many ways of treatment have been devised for its relief, upon which widely divergent views are held.

In general, surgical principles aim at restoration of the lumen to a blocked canal (if the canal be an essential one) or formation of an alternative route. It is with this premise that I set out the remarks in this paper.

In order to treat cases of lachrymal obstruction efficiently we must determine accurately the cause of its occurrence. Glancing first of all at the anatomical relations and structure of the canal, we find it lying first in soft tissues and then later surrounded by an unyielding bony canal. Physiologically the canal can be divided into two parts by means of its epithelium. In the first part, as far as the sac, it is a stratified pavement epithelium, and in the latter part it consists of a double layer of cylindrical epithelium. In this latter part of its course the wall of the canal is very freely supplied with vascular tissue, especially veins. There is also a considerable amount of adenoid tissue present. The presence of the adenoid tissue and the

[1] A Paper read at a meeting of the South-Western Ophthalmological Society, November 24th, 1925.

veins implies that obstruction may be readily caused by engorgement of the veins from nasal mischief, or by increase in the adenoidal element present.

When we look upon the number of cases of acute conjunctivitis in our out-patient and private practice, and recollect that a good deal of the secretion finds its way into the tear passages, we ask ourselves whether we ought to be more thorough in the treatment of the inflamed conjunctiva. I myself have frequently failed to get, by cultural methods, the organism causing the trouble. The researches of Lindner, and the recent confirmation of his work by Howard,[1] on the behaviour of pathogenic organisms in relation to the conjunctival epithelium, explain this difficulty. They point out that gonococci, pneumococci, the Koch-Weeks and influenza bacilli are only present in the discharge for a short while, then they are to be found in turf-like processes on the epithelium, especially at the cell borders (first on the bulbar and then on the palpebral conjunctiva). Later they penetrate the cell envelope, the gonococcus to the deepest extent, and by their ectotoxins stimulate the subjacent layers of epithelium, so that marked proliferation takes place. This process is often carried to excess, so that the epithelium is thicker than before. Phagocytosis by the epithelial cells takes place (leucocytosis in these inflammations is very limited). Finally, the surface epithelium comes off in patches. In this way organisms may find their way into the lachrymal canal, attach themselves to the epithelium, and stimulate the deeper layers of epithelium so that the mucous membrane becomes thicker and the lumen of the canal narrower than normal. This applies chiefly to the upper part of the canal. In order to attack the organisms once they have invaded the cells themselves

it is necessary to use lavage containing a body which has the property of attacking the invaders in the cells. With this object in view I have been using mercurochrome, 1 per cent, and have found it efficacious in clearing up pus rapidly, without doing harm to the tissues. Substances which cause necrosis, such as nitrate of silver, should not be used.

LACHRYMAL OBSTRUCTION IN INFANTS.

In these a mucocele may be present or there may be just continual watering of the affected eye. This depends on the fact that in very many instances the lachrymal canal does not become patent until shortly after birth, the obstruction being due either to a very thin membrane or to a plug of epithelium at the nasal orifice. Occasionally there is a spontaneous cure. In others I have effected a cure by means of a probe passed under an anæsthetic. Crigler[2], however, points out that since these mucoceles are not inflammations of the sac but rather infections of the retained products, a cure can be usually effected in the following manner. The essentials are that (*a*) the mucocele be as full as possible, (*b*) the patient be held as for examination of the eyes, *i.e.* between the knees, (*c*) the thumb is placed so that regurgitation from the sac to the conjunctiva through the punctum be prevented then rotated so that it is over the distended sac. Firm, abrupt pressure is then applied to the sac ; this forces the fluid from the sac down the canal, thus carrying away the obstruction.

LACHRYMAL OBSTRUCTION IN ADULTS.

(*a*) Obstruction without a Mucocele.

(i.) *At the punctum.* Dilatation with a dilator is the best treatment for these cases, as its use does not alter the capillary action by means of which the tears are conveyed to the lachrymal canal. If an incision has to be made, it is important that the gutter lie on the palpebral side, so that the furrow is in apposition to the globe and not on the lid margin.

(ii.) *Obstruction at the entry to the sac.* This may be brought about by a plug of mucus, actual engorgement of the mucous membrane thus giving rise to a narrowing of the lumen ; also by a stricture at the point where the canaliculus enters the sac.

In these cases it is my practice first of all to dilate the punctum, then to syringe in order to ascertain whether fluid will pass or no ; then I gently pass a large bulbous-ended probe to find out where the stricture is situated. It is of the greatest advantage to pass a little adrenalin into the canal to the site of obstruction ; this renders the parts less congested and instrumentation is made more easily. The advantage of a large probe is that it fully dilates the passages and therefore lessens the danger of a fold of mucous membrane being pushed in front of it. Access to the sac being gained, the probe is left in situ for ten minutes, and in the majority of cases the probe, which was tightly gripped at first, will be found to be much freer, and a larger one can then be passed. As a rule I leave a little mercurochrome in the sac.

Styles were formerly employed for this class of case, but owing to their use in unsuitable cases the practice has been discontinued.

In these cases, also, where there was a stricture in the neighbourhood of the entrance into the sac, slitting of the canaliculus has been practised, combining with the use of Weber's knife to divide the stricture. This treatment, with the use of probes, is impracticable if the patient is unable to come regularly at gradually lengthening intervals for nine months to a year. A great deal of the non-success which attended this mode of treatment was due to the fact that the patients were not made fully aware of the time required at the outset, and, in consequence, directly the condition was relieved to a great extent, considered themselves cured, whereas, as in stricture of the urethra relieved by sounds, regular attendance is required for a considerable time.

(iii.) *Obstruction below the sac.* In this type of case the services of the rhinologist should be sought, as it is of no avail to treat obstruction from the eye when the cause of the trouble is in the nose. My colleague, Mr. Wright, tells me that in 100 consecutive cases of lachrymal obstruction he found nasal trouble in 20 per cent.

In these cases, the sac should first be syringed out ; then a probe should be used in the manner described above. Very frequently one can feel the tip of the probe engage in a small depression, and if gently held there for a little while, in many cases it will be found to slip past the obstruction. Great gentleness and good anæsthesia are required in these cases. The patient then does not object, and there is also less danger of any untoward accident occurring. If this is done and the

probing fails to be successful no harm ensues, while on a subsequent occasion a probe will often pass.

In one case of mine, a patient with healed lupus of the nose when I first saw her had complete obstruction one side and a very small passage on the other. At the first attempt I was only able to pass a probe on the one side, but at the second visit I was able to pass one on each side. Now the passages will take the largest probe quite easily. I have not had the necessity to pass a probe on the one side for more than eight months ; the tighter side is responding to treatment, and she is coming to me at gradually lengthening intervals, at present every four months.

(*b*) **Obstruction with a mucocele.**

The infantile cases have been described above.

In adults, owing to obstruction to the passage from without, or within, the sac becomes dilated. Now when this occurs and has been present for some time, the walls of the sac become thickened and the sac becomes a definite cavity : treatment of the obstruction is made more difficult owing to the fact that the presence of the enlarged sac has probably altered the relations of the upper and lower orifices, and inflammation is readily kept up by the stagnation of inflammatory products therein. In this type of case it is essential to keep the sac as free from micro-organisms as possible.

As a rule operative interference becomes necessary in these cases and the methods that are in vogue are—

(1) Intranasal dacryocystotomy. (West.)
(2) Extranasal dacryocystotomy. (Toti.)
(3) Extirpation of the sac.

To my mind the first two operations carry out surgical principles more thoroughly than the third, in that they both endeavour to provide for the tears an alternative route. Most of these cases of lachrymal obstruction occur in women. One patient of mine when she was very near full time, came to me with a large mucocele. She was anxious not to have anything radical done until after the confinement. I saw her again a week later when she complained of discomfort in the swelling which was distinctly larger. To tide her over I decided to aspirate the sac with a hypodermic needle ; drawing forth distinctly turbid fluid, I left behind in the sac a little mercurochrome. I saw her again about one month later ; the sac had greatly diminished in size, the contents being now practically clear, and they could be expressed easily into the conjunctival sac.

Which operation is the best for each type of case ? Those cases in which the sac is shut off both above and below and there is no excess of epiphora are usually suitable for excision of the sac, which is also indicated in those cases where there is an ocular complication such as a corneal ulcer, and before operation for cataract where the sac is definitely infected.

When the sac is obstructed below the formation of a fresh opening into the nose is of great value, especially in those patients who have definite epiphora. Fraser, of Edinburgh, has recently published a further 42 cases in which he has performed this operation ; he reports 66 per cent. cures, and 25 per cent. recurrences, some failures. I myself favour the intranasal as against Toti's operation for the reason that if abnormalities are met with in the outer wall of the nose they can be dealt with more easily.

This is well illustrated in a case of mine ; a patient who had been treated with syringing and occasional probing for some time with success developed later on a complete block. I suggested that she should see a rhinologist, and Mr. Wright and I decided to perform West's operation. At operation there was found an enlarged air-cell in the region of the nasal incision ; this had to be opened out before the outer wall of the nose was exposed. When this was opened and a large piece of sac removed good drainage was secured. The obstruction in this case was due to the growth of the air-cell causing distortion of the tear passages. In another case in which West's operation had been performed the new opening closed up after a short while, but later the fluid when syringed through passed through the normal opening in to the inferior fossa of the nose, the new opening giving rest to the inflamed passages.

There are cases in which the obstruction is caused by removal of the sac. These cases are very unfortunate both for the surgeon and the patient. To relieve the condition excision of the lachrymal gland has been advised and performed ; this, to my mind, is unsound, for the conjunctival sac is deprived of its tears to wipe away undesirable objects and the eye becomes dry, a very unfortunate thing if the patient has to go to the tropics.

Morax[3] has recently described an operation devised to reform the tear passages ; a graft is made from the inner side of the arm and wrapped round a paraffin cylinder ; the middle meatus of the nose is opened from outside, the mucous membrane incised and sutured forwards, the graft being placed from the commissure to the nose.

Acute Dacryocystitis.

If the patient is first seen when the abscess has already formed the best way is to incise the swelling, clean out the pus and pack with mercurochrome. In this way the inflammation rapidly subsides. In cases where the sac is only tender and there is no way either into the conjunctiva or nose, aspiration of the sac by means of a hypodermic needle and insertion of mercurochrome, 1 per cent., should assist in resolution of the inflammation. I have treated eleven cases in this way; in eight the condition cleared up satisfactorily, while in the other three resolution was hindered by the skin being involved in the inflammatory process.

Summary.

1. In early cases treatment should aim at prevention of the formation of a mucocele.

2. Energetic treatment of acute conjunctivitis is advisable.

3. Intranasal causes must be treated where they exist.

4. In infantile cases Crigler's method is advisable; if that fails, an anæsthetic and a probe are needed.

5. In obstruction without enlargement of the sac, careful syringing, dilating and probing should be used. In these cases the intranasal operation has not been found to be a success. If probing fails then resort can be had to other means, one of which Morax has suggested.

6. Where a large sac exists with upper and lower openings obstructed and no epiphora, excision of the sac is indicated. This also should be undertaken when

there are complications such as a corneal ulcer, and before the extraction of a cataract.

7. When the lower opening is blocked intranasal dacryocystotomy will in many instances afford relief. Those cases in which the upper opening is obstructed are not, in my opinion, favourable cases.

8. Restoration of the tear passages in the manner described by Morax appears to be a valuable proceeding, inasmuch as it aims at restoration of an impervious channel and lessens lachrymation.

9. Examination of the nose will frequently give valuable information, and will help in those cases where syphilis is a factor.

In conclusion, it appears that no one line of treatment nor any particular operation is suitable in every case. Owing to the very many differing conditions which may present themselves on examination, also to the differing causes giving rise to the obstruction, each case should be judged on its merits and treated accordingly.

The temperament and social condition of the patient have also to be carefully studied, also whether the patient will be able to attend regularly or no.

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THE USE OF INSULIN IN SURGERY.[1]

BY

J. A. NIXON, C.M.G., M.D. Cantab., F.R.C.P.,

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Physician to the Bristol Royal Infirmary;
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ALTHOUGH diabetes and its treatment have been considered to be the province of physicians, surgery has reaped unexpected advantage from the introduction of insulin. The chief causes of death in diabetes are coma and infection. Now coma need not occur in diabetes, that is to say true diabetic coma with acetonæmia and acidosis. There are cases which develop coma from other causes such as uræmia, septicæmia, cerebral hemorrhage, an overdose of narcotics or even meningitis; the last diabetic who died comatose in my wards died of tuberculous meningitis, and we have all seen a cerebral hemorrhage terminate a long-standing case of diabetes.

But true diabetic coma is avoidable. As Joslin says, "The diabetic who dies of coma uncomplicated by infections dies needlessly."

General infections rank high amongst the causes of death. Pneumonia, tuberculosis and influenza certainly head the list, and these cannot as yet be reckoned as coming into the province of surgery.

[1] A Paper read at a meeting of the Bath and Bristol Branch of the British Medical Association on Wednesday, October 27th, 1926.

These general infections, however, cause nearly as high mortality amongst non-diabetics as diabetics.

Local infections appear to be actually of more importance, and perhaps the less severe they appear the less efficient is their treatment. In this connection Joslin remarks, " All are well aware that if a diabetic patient has gall-stones to be removed he instantly commands the services of the leading surgeon on the senior staff, but if a diabetic patient has a sore toe there is no house officer too young to dress it, until a few weeks later, if the patient survives that long, the surgeon in the amphitheatre amputates the thigh."

Minor infections occur frequently amongst diabetics and may affect the course of the disease profoundly. There are many diabetics, especially those who have passed middle life, who by careful dieting alone can live safely. No one wants to embark on an " insulin " regime if it can be avoided. It is not certain that a high blood-sugar is incompatible with good health and long life provided the individual has reached the sixth or seventh decade of life. If, however, such a person should fall a victim to some accidental septic infection the danger is grave. It has been constantly observed that the carbohydrate tolerance is greatly lowered by septic infection. A high blood-sugar renders a person peculiarly susceptible to attack by the ordinary pyogenic organisms. Thus we find diabetics very prone to boils, carbuncles, cellulitis, dental abscess, pyelitis, peri-nephric abscess and the like. It is well recognised that in cases of furunculosis or carbuncles glycosuria must always be looked for, and even if sugar is absent from the urine the amount of sugar in the blood should be investigated. Supposing that a hyperglycæmia is present, should insulin be administered ?

There seems to be a wide-spread impression that once insulin has been administered it will have to be continued throughout life. This is by no means universally true. It happens frequently that although the patient is a potential diabetic with a relatively low carbohydrate tolerance the tolerance is sufficient to allow an adequate diet to be taken without the help of insulin. When infection supervenes a lowered tolerance may result, which has two effects: the first, a lowered tolerance so that an adequate amount of carbohydrate can no longer be metabolised; and second, that resistance to infection is dangerously decreased. In such a case there must be no hesitation about the use of insulin. The carbohydrate tolerance may rise again after the infection has been successfully resisted and a non-insulin life be resumed. It sometimes happens that a severe degree of diabetes is discovered for the first time during the course of some local infection, such as a carbuncle; strict dieting in the old-fashioned sense cannot be too vigorously condemned. Deaths from coma most commonly take place when the diet is suddenly changed. If the carbohydrate is restricted and fat and protein simultaneously increased, death from coma may occur within the week. An infection is an additional load for a diabetic to carry; he needs more, not less, carbohydrate. The only way to enable him to take the extra carbohydrate he requires is to give insulin in proportion to the carbohydrate demand.

There is no need to emphasise the dangers of a high fat diet; if the carbohydrate tolerance is lowered the dangers of ketosis from an excess of fat over the assimilable carbohydrate are common knowledge.

Gangrene is a complication that calls for separate consideration. It appears in diabetes in two forms.

There is the sudden complete blocking of a large vessel. This is not a diabetic gangrene at all; it is a senile or arterio-sclerotic gangrene occurring in a diabetic patient, who may not survive amputation because of diabetes. Insulin may enable such a patient to stand an operation which in an untreated diabetic would prove fatal, but the cases I have seen and, in some instances, treated with insulin before or after operation have generally died. The other form, which is true diabetic gangrene, results from a local infection to which the soft tissues respond by a rapidly-spreading necrosis. Joslin has pointed out how frequently this form of gangrene is due to injuries occurring to unclean feet. I think it was Joslin who urged that a diabetic should be taught to keep his feet as clean as his face because of this danger. Comparatively slight injuries may lead to severe gangrene. Insulin treatment should never be delayed. Without insulin operation will very likely do no good, with insulin it may prove unnecessary, and if insulin alone does not cure the gangrene it will contribute wonderfully to the success of an operation.

There are certain local infections which may be suspected of being more than mere complications of diabetes; gall-stones, cholecystitis and pericholecystitis have often been suspected to be the exciting focus which has led to a pancreatitis from which diabetes has ensued.

Without expressing the opinion that every such case will benefit from operation, it can be laid down definitely that if other considerations render operation desirable no one should refrain from operating merely because of diabetes.

This brings us to a general consideration of the problem of operations in diabetic subjects. Physicians and surgeons sometimes delay surgical operations in

diabetics which in non-diabetics would be performed early and with favourable results. Owing to their poor resistance to infections diabetics as a group require surgery more frequently perhaps than non-diabetics. Where infection is present, as, for example, in appendicitis or pelvic suppuration, diabetics stand in more urgent need of operation than non-diabetics. Infective conditions need even earlier recognition and operation than in non-diabetics, because infection reduces carbohydrate tolerance and predisposes to acidosis.

If time permits of deliberate operation the patient should be given a preparatory course of insulin. I do not confine this advice to major surgical procedures; preparation is no less important in such minor operations as incising boils and carbuncles.

Whenever possible this preparation should be continued for two or three weeks, to allow of restoring the blood sugar to a normal level, to furnishing the patient with an adequate carbohydrate diet and to repairing so far as possible the nutrition.

Here may I make a digression in reference to under-nutrition as a remedial aid in diabetes. In England we have never wholly freed our minds from the superstition of Guelpa that was so ardently adopted by Allen. I refer to the so-called starvation cure of diabetes.

There is still a lingering inclination to bow the knee in the house of famine as well as that of insulin and plenty.

Mosenthal has put the case graphically: "Insulin diminishes the blood-sugar and sets aside glycosuria because it brings about an increased utilisation of glucose, whereas starvation accomplishes this by allowing the accumulated glucose to escape in the urine.

In one case the stranded ship is floated off the sand-bar by the rising tide with its freight intact, while in the other the cargo has to be thrown overboard to enable the vessel to proceed on its way." He agrees, though, that there are exceptional patients in whom the use of a low diet for several days will apparently "activate" the insulin.

But when surgical procedures are contemplated starvation should be avoided like the plague. Insulin brings about that storage of glycogen which is so vitally essential after operation; under-nutrition not only does not add to the store of glycogen, it still further depletes it. No surgeon recognised the dangers of operations in the pre-insulin days more clearly than Treves. "Diabetes," he wrote, "offers a serious bar to any kind of operation . . . a wound in a diabetic patient will probably not heal, while the tissues appear to offer the most favourable soil for the development of putrefactive and pyogenic bacteria. The wound gapes, suppurates and sloughs."

We believe now that it is the high sugar content of the blood that furnishes such a favourable soil to pyogenic organisms. This is almost the only positive harm that can be traced to high blood sugar by itself unless we include cataract. It is little short of miraculous to see sloughing stop, suppuration decrease and the gaping edges of a wound take on a healthy granulation when by means of insulin a high blood sugar is brought back to near normal. No surgeon who has once seen this will want further evidence of the value of insulin in hyperglycæmia.

In another relation to surgery comes the question of anæsthetics. Apart from the gravity of the operation itself diabetics incur great dangers from anæsthesia. Anæsthesia produces a rise in blood-sugar. Some

anæsthetics are worse than others in this respect, not one is safe. Chloroform is notoriously the most dangerous and perhaps gas and oxygen the least. Even local anæsthesia has its risks; infiltration anæsthesia may cause extensive necrosis and sloughing. Coma may follow spinal as well as inhalation anæsthesia.

Dr. Flemming was, I think, the first anæsthetist to insist that in a non-diabetic patient pre-operative starvation by itself could produce post-operative acetonæmia and acidosis. What was true of the non-diabetic applies far more forcibly to the diabetic. There is no form of anæsthesia safe for a diabetic until he has been enabled to assimilate an adequate amount of carbohydrate in his diet. It is sugar that protects the diabetic against the dangers of infection, the shock of an operation and post-anæsthetic coma. Insulin, as it were, raises the blockade, and the blood-borne cargo of sugar comes to the relief of the beleaguered tissues.

In post-operative shock there is always present an interference with the internal respiration. Crile believes that the anæsthesia caused by the administration of general anæsthetics is due primarily to this interference. Dr. Fisher, of Boston, Mass., holds that this interference with the internal respiration causes internal acidosis and asphyxia, resulting in lessened oxidation within the cell. By promoting and improving such oxidative processes we can promote the recovery of the body cells and hasten recovery from shock.

When no carbohydrate is available to balance the ketogenic material in the body an excess of ketones is produced. The ketone acids then combine with the alkali of the blood stream and reduce the CO_2 combining

power. This decrease in the alkali reserve is accompanied by a diminished alkalinity of the blood-stream. These same conditions are present in involuntary fasts, in prolonged vomiting, in cyclic vomiting, after etherisation, in some acute infections, and, of course, in the ketosis of diabetes.

Some interesting observations have recently been made on the blood changes which follow in a Marathon run. The runners who had a normal blood-sugar content at the finish showed no signs or symptoms of shock. The runners who were collapsed at the finish had very low blood-sugars and presented the typical picture of an overdose of insulin. With all this evidence it seems clear that the rational way to combat shock will include giving to the body some substance which will give rise to an immediate supply of energy, and maintaining that supply so long as may be necessary, at the same time furnishing sufficient fluids to keep up the circulating fluid volume. Believing that in the state of shock there is an internal asphyxia and acidosis with oxidative processes held in check, any method for promoting combustion and oxidation and at the same time providing heat-energy should be effective in combating shock.

The diabetic patient enters upon an operation with these oxidative processes already embarrassed; it is small wonder if then diabetes predisposes to post-operative shock.

The combination of glucose with insulin has come to be the established method of treating diabetic and non-diabetic acidosis; the treatment seems to have a settled place in the treatment of post-operative shock in diabetics and non-diabetics.

The first defensive reaction of the organism in shock is the mobilisation of all the available glycogen in the

blood-stream to be distributed to the body cells to furnish them with energy; this supply is, however, soon exhausted, hence the replenishing of the glycogen, as by insulin and glucose, thereby becomes of extreme importance in the rational treatment of shock.

In a diabetic untreated before operation the store of glycogen is already fallen dangerously low.

Summary.

The principal uses of insulin in surgery are:—

1. To enable diabetic patients to combat infection either with or without operation.

2. To render safer for diabetic patients surgical operation whether urgent or deliberate.

3. To protect diabetic patients against the dangers of anæsthesia.

4. To furnish glucose in an oxidisable form to patients, whether diabetic or non-diabetic, who are suffering from shock.

Fisher's method of treating shock is as follows:—

A sterile solution of glucose is used, preferably of 10 to 15 per cent. strength, 500 to 2,000 c.c. may be given depending on the severity of the condition. It should be injected slowly, taking at least an hour, preferably two to four hours (for dilatation of the right heart is a real danger). The amount of insulin injected depends upon the amount of glucose injected. For every 3 grammes of glucose 1 unit of U.20 insulin should be given. The total amount of insulin to be given should be divided into two equal doses, and one part given a quarter of an hour after the intravenous administration has begun, the remainder at the end. So long as there is glycosuria there is no danger of an overdose of insulin. Other drugs may interfere

with or influence the effects of this treatment. For instance, adrenalin will counteract the insulin, pituitrin diminishes and sometimes nullifies the sugar-fall, ergotoxin given previously increases the effect of insulin.

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THE TREATMENT OF REPRESSED MEMORIES BY HYPNOTISM.

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HYPNOTISM was first used in the treatment of repressed memories by Freud and Breuer. They, however, abandoned it in favour of the much more lengthy and complicated process of psycho-analysis, because the results were "capricious and not permanent." There is, however, very clear evidence that many cases can be so treated and cured; and the process is so simple that it seems a pity such a valuable aid in our treatment of a group of patients who come to us suffering from severe illness should be neglected. With the prospect of establishing a cure of a life-long disease in a few days there seems no reason why, in suitable cases, the patient should not be given the benefit of treatment by direct suggestion.

1. *Definition of Repressed Memory.*—A memory which, in childhood, is implanted upon the subconscious mind under such circumstances that it is forgotten, and which later produces symptoms of illness, mental or physical, is a repressed memory. This definition is open to many objections; but, as a basis of explanation, it suffices to show us the origin of the disease we have to treat.

It is taken for granted that everyone has repressed memories of painful incidents which, in the majority

of cases, lead to no harmful results, repression being Nature's method of dealing with painful experiences. But in certain cases, because of some mental overstrain in later life, sometimes under conditions presenting associated ideas, the repressed memory acts as an irritant, and produces illness out of all proportion to the mental distress which is the immediate exciting cause. With the increased turmoil of modern civilisation these cases are becoming more common, as well as more insistent that we shall cure them, and allow them to take their place in the conflict of life.

2. *Symptoms.*—These may cover anything, from severe pain to a simple state of exhaustion, because they reproduce what occurred at the time the memory was repressed. Certain symptoms, as will be explained later, are suggestive of this nervous condition; but the only true test is the exclusion of all physical causes, or the failure of the patient to respond to the ordinary treatment of the ostensible cause.

3. *Treatment.*—As the illness is due chiefly to the repression of the memory and not to the memory itself, the object of the physician must be to recall to the patient's conscious mind the forgotten incident which is acting like an explosive energy in an enclosed space, or like a force which, coming up against an impregnable brick wall, rebounds and gathers strength for a fresh effort. Take a hypothetical case. Suppose (to take an extreme case) one saw one's father run over and killed by a taxi; in future the sight of a taxi would impose a horror which the revived memory of the accident would explain. One would reason that such a thing could not occur again, and in time would become accustomed to seeing taxis without horror. But if, as often happens in childhood, the memory of the sight is repressed, then every time one sees a taxi

the horror arises. The subconscious memory rises also, but does not reach the conscious mind, rebounding, as it were, from the brick wall and increasing the horror, which remains unexplained, until one finds that one has such a horror of taxis that one cannot bear to see them at all.

It will be seen from this hypothetical case that, if we can recall the memory into the conscious mind the symptoms will be explained, and reason will adjust the recollection. The repressed memory is seldom of so serious a character as this, but is generally of an almost trifling nature, as in the case illustrated below.

In order to recall the memory only the first stage of hypnosis is usually necessary, *i.e.* that stage in which the voluntary movements most frequently accomplished by reflex action are inhibited. Ninety per cent. of people are capable of being hypnotised to this extent.

The patient is placed in a recumbent position in order that complete relaxation may be obtained. I do not begin until he is thoroughly comfortable. Then he is asked to concentrate all his attention on a particular object (usually the back of my watch), held about a foot from his eyes. After a few moments, while gently stroking his forehead I suggest that he is growing drowsy, that his eyelids are growing heavy, and tell him that he may blink. After suggesting this once or twice, if I notice the eyelid drooping, he is told to close his eyes, and then make the first inhibitory suggestion, that he cannot open them. I again suggest that he is drowsy, and tell him to sleep. The suggestion is then repeated that he cannot open his eyes. If I notice a flicker of the eyelids I repeat it more strongly, and tell him that he may try to open them but that he cannot—that he doesn't want to do so. If the eyes are definitely closed, so that he cannot open them,

and the patient is comfortable and relaxed, this is all that is necessary.

It is better on the first occasion not to try to recall the memory, but to allow the patient to become accustomed to the restful sensation of hypnosis ; then, on the second or third visit, when confidence is mutually established, I proceed with the suggestion that he shall remember the incident in early childhood when his symptoms first declared themselves, and leave him. On returning after an interval of a few minutes I ask him if he can remember anything. Generally he visualises something which has no connection with the symptoms, but which will later become an important piece of a kind of mental jigsaw puzzle. After again stroking his forehead and telling him to sleep, I leave him to recall something further.

The process of recalling a repressed memory under hypnosis is rather exhausting to the patient ; it is well therefore to proceed slowly. Sometimes the whole memory comes up in one effort, but more frequently in separate pieces both during hypnosis and after, until the whole incident is pieced together, as the following case will show.

On February 14th, 1923, Miss A. B. was brought to me by her doctor with the assurance that nothing in her physical condition could be found to account for the symptoms. She gave me the following history : She suffered from attacks of weakness, which, coming on suddenly, were accompanied by great depression. The duration varied from a few days to weeks. They occurred at intervals varying from six weeks to three months. Frequently they were accompanied by a rise of temperature to 101° or 102°, and on these occasions she was generally labelled "influenza." Sometimes she had a pain in the side of her chest. She had spent six months in hospitals and sanatoria under suspicion of tuberculosis ; but the presence of this malady could never be proved. The first

remembered attack occurred at the age of 14; and, with slightly varying symptoms, such as the rise of temperature, pain in the chest, cough, headache or sore throat, but always with pronounced weakness and depression, they had recurred ever since. On physical examination I could find no evidence of organic disease, except some defects of the teeth, which were remedied later. I explained briefly the nature of repressed memories and of hypnotism, and induced a mild feeling of drowsiness.

On February 16th I hypnotised her as far as the first stage, and removed a headache by suggestion. I then suggested that she should recall the cause of her distressing symptoms in some incident which took place when she was a small child. She did not remember any incident.

On February 17th she reported that on the previous evening the memory of two forgotten incidents had come to her: 1. A warm castor oil plaster was being placed on her chest. 2. She was looking downstairs and feeling afraid.

I again hypnotised her lightly, and she recalled the memory of a staircase, and seeing a large black object, which frightened her; also of crying and of her mother telling her not to be silly.

On February 19th she reported that she had remembered her mother's presence in the next room, and her distress that she did not come to her when she called.

I again hypnotised her; and this time the disjointed pieces formed themselves into this clear picture. A child, standing at the top of a staircase in her nightgown, has been sent to see what has caused a noise in the dining-room. At that moment the shadow of a head appears upon the blind of the window at the bottom of the stairs, because someone has passed on the pavement outside, intercepting the light from the street lamp. The child is frightened, and has a sensation of weakness in the legs, which refuse to move. She cries, her mother comes out of the room, and, telling her not to be silly, passes her and goes down the stairs. The child collapses, and lies for some time with the draught from a window behind blowing on her side. Then, picking herself up, she goes to her bed, where she

feels very much alone and unwanted, and decides not to appeal for help again.

On February 21st she reported that the memory was now complete, certain minor additions having been recalled. She also said that she was sure she developed an attack of bronchitis. She declared herself to be cured.

The subsequent history may not be out of place here, as showing that no relapse has occurred in three years.

March 7th (extract from a letter): "I am so pleased to tell you that I am ever so well—my appetite good and my weight up to 7 st." (an increase of 4 lbs.). "What a change in such a short time, and not all outward and visible! My mother writes that she cannot remember my being ill until I was between 4 and 6 years old, when I had bronchitis and was sufficiently ill to have a doctor. We were then living in the house I described. From then onwards I had attacks of weakness, and when I was twelve the doctor advised my leaving school, which I did." April 4th: "I am still improving, and my weight this morning was 7 st. 6 lbs." June 3rd: "I still feel very well." October 7th: She reported being very well. Weight 7 st. 8 lbs., and, apart from an attack of ptomaine poisoning while abroad, had remained well. 1924: In January there was a mild attack of depression, which cleared up in a few days with suggestion under hypnosis. The weight had fallen to 6 st. 3 lbs. March 11th: "I am now much better and weight about 7 st. again." August 1st: I saw her with a slight attack of rhinitis, which cleared up with a little local treatment. September 26th: An attack of acute gastritis, which responded to medicine and three hypnotic treatments. 1925: Remained well. 1926: Reported that the cure had been successful.

I have selected this case for description at some length, because, firstly, it illustrates certain points common to most cases of repressed memories; secondly, because it proves that a purely mental

phenomenon can produce definite physical signs, like a rise of temperature, if such physical conditions occurred at the time of the repression ; thirdly, because it would need a wilfully unnecessary kind of imagination to read any sexual significance into it.

The patient suffered from definite depression, a condition which I have found in nearly all, though not quite all, the cases I have treated. This depression is one of the most serious symptoms to the patient ; and, because of the difficulty of its explanation or even of its description, it is in danger of being neglected. Sometimes it is accompanied by fear ; but, when asked of what he is afraid the patient is unable to say, or gives an evasive answer; the evasive reply is very suggestive of a repressed memory.

Pain is a common symptom, and appears when some physical injury took place at the time of the repression. Probably in the case described, an attack of pleurisy was induced by the draught from the open window.

A sense of injustice, combined with a marked antipathy towards some person, place or thing, are suggestive symptoms. In this case the patient had an antipathy to women who had any authority over her.

Then there is the interesting reproduction of physical signs. The commonest forms are bruises, definite discoloured patches which appear without apparent cause. Dickens, who had such a wonderful power of observation, has described one upon the lip of Rosa Dartle. I have seen areas of congestion, and even deformities, resulting from successive attacks of inflammation due to these repressed memories. But on the whole physical signs are more marked by their absence than by their presence.

Although sex is sometimes a factor in these cases, it will be found that fear is a more dominating feature ; and if the psycho-analysts had spent as much time and patience in the elucidation of the mystery of fear as they have on the symbols of sex they would have increased the benefit to humanity an hundredfold.

Reviews of Books.

What it Feels Like. By "Doctor Robin." Pp. 78. Paper cover. London: Student Christian Movement. Price 2s.—It is often indiscreet to keep old letters, but fortunately those of "Dr. Robin" to his old friend Bill were not destroyed. "Dr. Robin" is a teacher in a large Chinese school of medicine, and in *What it feels like—Letters from a Doctor out East to a Colleague at Home*, he makes one interested in, sympathetic for, and even envious of his job. There are most thrilling stories of his work, telling of tropical diseases and of famine, of student life in China and of casualty work with the army of the so-called Christian General Feng-Yu Hsiang. He shows that a missionary can be—and that a real one is essentially—a normal man. This book provides most entertaining reading and much food for thought when it is finished.

Gould's Medical Dictionary. Edited by R. J. E. Scott, M.D. Imperial octavo. Pp. xi., 1,398. Illustrated throughout. Maple Press Co., York, Pa., U.S.A. London: H. K. Lewis & Co. Ltd. 1926. 30s. net.—That since 1890 no less than 700,000 copies of this standard work have been sold is sufficient evidence of a continuing demand. The present edition claims 1,400 pages, and 76,000 words, of which 5,000 are new. As the editor felicitously explains, "The skilful plan, wide scope, and distinctive qualities of the previous lexicons have been maintained." Even such humble words as "quiz" and "turps" have their place. The unhappy practice of naming discoveries and processes from those who describe them makes a work of this kind invaluable to the general reader. Here he will find Adam's pill, Baelz's disease, Farr's tubercle, Garel's sign, Narath's operation and Penzoldt's test. A host of proprietary names for well-known drugs forms no small part of the book. Those who have never mastered the new nomenclatures will welcome the anatomical tables, while other exhaustive lists, such as that of bacteria, increase the value of the work for reference. The seeker after information whom this book does not satisfy must be hard to please. One or two definitions are unusual, *e.g.* "nyctalopia, night vision . . . the sight

is better by night," instead of the opposite and customary meaning. The statement that contramine is the "same as intramine" is inaccurate. The spelling is unreliable. Such forms as "tumor, color" one must expect and condone, but there is no need for "cumin." On the vexed question of the final "e" the editor prefers a definite system agreement with common practice; where he departs from it, it is often hard to know why, *e.g.* "carmin, margarin, phosphatid, alypin" (but "xanthine, lipide, stovaine"). "Adrenalin" is used throughout the text, but "adrenaline" is the only spelling given. More seriously objectionable is the treatment of words of classical origin. "Esophagus, cecal, hematoma" are an offence, and this practice tends to avoidable confusion: "edemania" (aedoemania) and "edema" (oedema), "celology" and "celom" (coelom), "amenomania" (amaenomania) and "amenia" are nowise related. The method is not even consistently maintained; "allesthesia, see allocheiria," "allocheiria, see allochiria"; "cherophobia" is preferred, but "chaeromania," "esthematology, aesthema, enomania, oenilism, celiemia, coelioplegia" all appear without alternative. The text is clear, the paper good, and the whole volume extremely well got up.

A Guide to Anatomy: for Students of Medical Gymnastics, Massage and Medical Electricity. By E. D. Ewart. Second Edition. 8vo. Pp. xiv., 336. 4 coloured plates, 93 illustrations. London: H. K. Lewis & Co. Ltd. 1926. Price 12s. 6d.—This volume represents the second edition of a manual designed for the instruction of massage pupils in anatomy, and deals fully and clearly with those parts of the subject which are more especially in the province of the masseuse, and more sketchily with the remainder of it. In looking through the work, one is impressed once more with the vast amount of anatomical knowledge which is required of the pupil, and also with the fact that here she will surely find all the knowledge of the theoretical side of her subject set forth in a systematic and helpful way. There are a few minor details to which attention might be directed in the preparation of any future edition. The statement that "it (the small intestine) is suspended to the spinal column by the mesentery" is not good either as grammar or anatomy, while it is open to doubt whether the spinal accessory nerve can be recognised by palpation at the posterior border of the sterno-mastoid muscle. It would also be well in a book on a subject which pupils find

so difficult to decide whether to talk of the pelvic colon or the sigmoid flexure, and to be consistent in the use of the term selected. The book is as clear and readable as such a text-book can be, and we recommend it with confidence to those for whom it has been written. Features worthy of commendation are the use of the "old" terminology, and the illustrations, which are clear and admirably adapted to their purpose.

Reports of the St. Andrew's (James Mackenzie) Institute for Clinical Research, St. Andrew's, Fife. Vol. III. Edited by Professor David Waterston, M.D., F.R.C.S. (Edin.). Pp. 227. Oxford Medical Publications. 1926. Price 10s. 6d.—This new volume of the St. Andrew's Reports opens with a reproduction of Gordon Shield's portrait of Sir James Mackenzie. Like most of Mackenzie's portraits, it gives the impression of an austere and rather forbidding personality. Nothing could be further from the truth, as we find in Maitland Ramsay's address on Mackenzie which comes first in the printed matter of this volume. Several of the other papers are of considerable interest. Dr. Alexander Hynd found that among 14 cases of eclampsia there were two groups: in one the optical activity of the urinary albumin was that of serum albumin, in the other it was that of lactalbumin. He suggests, therefore, that in some cases eclampsia is an anaphylactic reaction to foreign protein escaping into the circulation from the mammary gland. We trust this discovery will not revive the barbarous practice of breast amputation as a treatment of eclampsia, which had a brief vogue in certain continental clinics some years ago. In another interesting paper Dr. James Orr has assembled a number of cases of intermittent limp and allied phenomena. Dr. J. H. P. Paton gives a valuable analysis of his notes on a large number of school-girls, one of his points being that the size of the tonsil is not a satisfactory index of its morbidity.

The Principles of Diagnosis and Treatment in Heart Affections. By Sir James Mackenzie, M.D., F.R.S., etc., and James Orr, M.B., Ch.B. Third edition. Pp. viii., 242. Oxford Medical Publications. 1926. Price 10s. 6d.—It is not surprising that this book should have reached a third edition, for it embodies in a compact and easily readable form Mackenzie's principles of cardiology in their application to every-day practice. Dr. Orr has succeeded in imparting the flavour of the St. Andrew's work to the book without increasing its bulk. It is fortunate that an exposition of Mackenzie's teaching,

including its last phase, is available in so handy a form ; and although it is unlikely that any further edition will be called for, this one will doubtless enjoy a long period of popularity.

The Heart. By A. G. Gibson, D.M., F.R.C.P. London. Pp. vii., 108. Oxford Medical Publications. 1926. Price 5s. —This is one of the new " Oxford Medical Handbooks " which, we are told in a publisher's note, are not short text-books, but only brief surveys of general principles. Nevertheless, Dr. Gibson has succeeded in compressing a marvellous amount of information into the very small space allotted to him. The book can be read through in a few hours, and students as well as practitioners may be trusted to derive from it a well-balanced conception of modern cardiology.

Modern Methods in Heart Disease. By Francis Heatherley, M.B., B.S. (Lond.), F.R.C.S. Second edition. Pp. xii., 269. London : Baillière, Tindall & Cox. 1926. Price 8s. 6d.—To the first edition, which we reviewed in 1923, Dr. Heatherley has now added a chapter on blood-pressure ; and, in an appendix, some hints on the home treatment of functional disorders of the heart. These hints are also printed separately in pamphlet form, for distribution to patients. Dr. Heatherley writes in a cheerful, breezy style, which doubtless has a therapeutic value for the patients to whom these hints are addressed.

Diseases of Children. By H. C. Cameron, M.A., M.D. (Cantab.), F.R.C.P. (Lond.). Pp. ix., 199. Oxford University Press. 1926. Price 5s.—At the present time the curriculum of a medical student is so crowded that it is impossible to devote an adequate amount of time to the theoretical and practical study of pediatrics. There are numerous excellent books on the subject, but many of these contain an excessive amount of matter which requires prolonged reading to digest. There are, on the other hand, cram books which are quite inadequate and undesirable. Dr. Cameron has succeeded admirably in combining the advantages of both types of text-book and excluding their disadvantages. He has introduced an up-to-date, compact and readable volume on diseases of children which will prove a great boon to medical students. The author has somewhat unusual qualifications for writing a book on pediatrics, for he possesses a wide experience not only as a clinician, but also as an original worker on special branches of the subject, and is thus able to speak with

special authority. In this connection the section (pp. 106–109) on " attacks of the abdominal pain, prostration and vomiting " is of special value. We are glad to see that Dr. Cameron has laid special stress on the importance of breast feeding, and failing this, he gives advice as to modifying the best substitute —cow's milk—for the human infant. It is quite cheering to meet with a book that does not encourage the use of proprietary foods, but gives a recipe in one instance for a simple carbohydrate preparation rather than advocating " much advertised preparations which claim a universal application and success." The chapters on " Constipation " and " Inherited Predisposition to Disease " are most instructive, and quite in keeping with the general high standard of the work, which we heartily recommend to all those interested in the subject.

Obesity. By Leonard Williams. M.D. (Glas.). 8vo. Pp. 171. Illustrated. Oxford Medical Publications. 1926. Price 10s. 6d.—Dividing his subject into two parts, namely alimentary and endocrine obesity, Dr. Leonard Williams first deals with diagnosis and then with treatment. Throughout the book he writes with a lucidity, a wit and an unconventionality that are rare in a medical work, and which so compel one's attention that the book is difficult to put down. Many of his views will no doubt be challenged, and the chapter entitled " Eve," which deals with obesity in women, is especially likely to excite criticism. The author's views on the necessity for an unfired diet in the treatment of obesity need to be impressed upon the profession, and his simple directions as to the employment of endocrine remedies will be much appreciated at a time when the market is flooded with all sorts of pluriglandular preparations.

Surgical Operations. By W. Ibbotson, F.R.C.S. (Edin.). Second edition. Pp. 356. Illustrated. London : Faber and Gwyer. 1926. Price 6s. 6d.—The opening pages of this book contain a description of general surgical technique, the management of an operating theatre and methods of sterilisation. Also in this section is a list of ligature and suture materials, together with an explanation of the methods for rendering them aseptic ; in addition mention is made of various dressings, antiseptics and other surgical necessities. A useful paragraph explains the commoner affixes of operation nomenclature, for example : " ectomy =excision of," etc. Then follows an extensive list of the operations of surgery, with many of their variations and modifications, and the instruments required for

each. The whole is arranged in a manner facilitating reference to any particular operation. The final section consists of a series of excellent illustrations of various instruments, named and arranged in alphabetical order. The frontispiece illustrates the Trendelenburg, Fowler and lithotomy positions. Considering the time and trouble which the author must have taken in compiling the work, its uses are extremely limited. It is of most value to a nurse about to undertake the duties of a theatre sister, and might be of assistance to one who contemplated opening a new clinic or to a student about to present himself for an oral examination in surgery.

Hunter Tod's Diseases of the Ear. Second Edition. Revised by G. C. Cathcart, M.A. (Edin.), M.D. 8vo. Pp. 333. 4 plates, 87 figures. Oxford Medical Publications. 1926. Price 10s.6d.—A second edition of this excellent little book has been long overdue. An octavo volume just over half an inch thick that gives enough information for the treatment of all but rare ear troubles is certain of a welcome. The book opens with a short chapter on acoustics, which may serve to remind but is too sketchy for reference and might have been omitted. Then follows an excellent account of the anatomy, development, etc., of the ear, which has been re-written to meet modern demands, and of the methods of examination. Disease of the external ear is fully discussed in forty pages. As is natural, disease of the middle ear occupies the bulk of the book. The subject is dealt with clearly and exhaustively: an account of operations on the mastoid sufficient for emergency use is included, and, rather remotely consigned to the last chapter, a short exposition of nasal and pharyngeal conditions affecting the ear. The various intracranial disasters that may complicate otitis media receive the attention they deserve, and a separate chapter is given to the aural complications of acute fevers and other diseases. The description of disorders of the internal ear is disappointing. None of the tests of the vestibule is accurately described—for example, the posterior canals are said to lie in one plane. The old fable that Menière's disease is due to hemorrhage into the labyrinth is repeated. There is one sentence only that might be interpreted as referring to acoustic nerve tumour. Apart from a short account of one method of labyrinthotomy, treatment of internal ear disease, including a note on "the Zund-Burguet electrophonoide," is allotted twenty-one lines. The whole book is generously illustrated. The diagrams and figures are well chosen and reproduced, the directions for various manipulations are clear

and concise, there are numerous prescriptions and a complete index. These features, and its general compactness, make this book a very acceptable addition to the library of student or practitioner.

Treatment of Chronic Deafness by the Electrophonoide. By G. C. Cathcart, M.A. (Edin.), M.D. 8vo. Pp. 85, one figure. Oxford Medical Publications. 1926. Price 4s. 6d.—The author of this small treatise is manifestly an enthusiastic believer in the method he advocates for the treatment of one of the most intractable of human ills, chronic progressive deafness. Nevertheless, he feels it incumbent on him to rebut a charge of quackery, and to justify his means by the good results, despite an obscure rationale. Briefly, he aims at re-educating the deaf ear, and relates how the apparatus called the Electrophonoide enables him to do this. The description of the device would have been clearer if the instrument illustrated had been of the same pattern as that described. But since we are told only in what order to manipulate the rather complex arrangement of knobs and handles, the internal mechanism being strictly taboo, there is a temptation to regard this machine as on a par with Abram's magic box. Doubtless examination of the actual instrument —it looks costly, if ornamental—would elucidate much. We are confronted with an obviously sincere plea for a new outlook and a new method, and Dr. Cathcart analyses his results in 100 cases, nerve deafness, catarrhal otitis and otosclerosis in equal proportions, treated solely by this apparatus and vibro-massage. In every case, including 6 children under twelve, at least two authorities had pronounced the deafness hopeless and incurable: yet two-thirds of each class found definite benefit. The criterion is the distance at which ordinary speech can be heard. The author has devoted special attention to uniform voice production, and is able to detect after an interval of six or twelve months the loss of hearing measured by a diminution of audibility distance by one foot in thirty! "However much the patient may improve for the voice, his range of hearing usually remains the same for the tuning-forks." It is unfortunate that twelve "treatments" of each ear are needed before a prognosis can be given: with 32 patients the results of this preliminary course were negative, and treatment was abandoned, representing 768 "treatments." The remaining 68 patients improved. Of these 8 could before treatment hear with either ear at 12 feet or more, another 9 could hear at 16 feet

with the better ear, so that in 17 the deafness was mild only. But 26 patients with severe deafness (there were no extreme cases) received a remarkable degree of benefit. Of the whole 68, 15 had three full courses of thirty " treatments " of each ear, 35 had two courses, while 18 needed one course only, a total of 7,980 "treatments," or an average of 117 each. We envy Dr. Cathcart his patience—and his material.

The Abdomen in Labour. By R. N. Porritt, M.R.C.S. Pp. xiv., 76. Illustrated. Oxford Medical Publications. 1926. Price 5s.—In this monograph the author points out the advantages of the abdominal examination of the parturient woman over the vaginal examination. He advocates the dorsal position in labour both for normal and instrumental cases, and in this he will receive the support of a large number of obstetricians. The diagnosis of the commencement and the complications of labour by abdominal examination is fully dealt with and illustrated with simple diagrams, and this chapter is excellent. However, in the next chapter it is very difficult to see how, once the head is in the pelvis, one can determine the progress of labour by abdominal examination alone. The author quite rightly deprecates the use of frequent vaginal examinations, but completely ignores the excellent information which can be obtained by rectal examination without prejudice to the health of the patient. The treatise as a whole is excellent, and if it only stirs up interest and concentrates it in the examination of the abdomen by medical practitioners, it will have achieved a great object and decreased the mortality and morbidity amongst parturient women.

The Diseases of Women. Eighth edition. By Sir John Bland-Sutton, LL.D., F.R.C.S., and A. E. Giles, M.D., F.R.C.S. (Edin.). Pp. 600. Illustrated. London: Wm. Heinemann Ltd. 1926. Price 15s.—The first edition of this popular book was published in 1897, and the present edition is a store of information. The text has been re-arranged on pathological lines, rather than anatomical. Of particular interest at the present time are the chapters on the uses of radium and X-rays and of endocrine therapy in gynæcology. The general after-results of abdominal operations are recorded and are worthy of study, being based on the observations of 1,000 cases by Dr. Giles. It is noted that memory seems to be affected in about 25 per cent. of cases, and that the deterioration of memory appears to be directly proportioned to the duration of the operation. We welcome this edition very heartily.

The Quartz Mercury Vapour Lamp. By J. Bell Ferguson, M.D. Pp. xii., 106. Illustrated. London: H. K. Lewis & Co. Ltd. 1926. Price 6s.—The busy practitioner of to-day who contemplates adding ultra-violet therapy to his armamentarium will welcome Dr. Ferguson's publication as a really practical and sound guide. This little book contains in concise form a mass of lucid information on the mercury vapour lamp. There is a vast field for the general practitioner in the application of ultra-violet radiation; it is perhaps the very fact that it has been suggested as a panacea that has made many hesitate to install it. No single therapeutic measure can be a "cure all," but the field of beneficial application of ultra-violet radiation is so wide that it should be available in every district. Dr. Ferguson's chapter on its practical use in a modern public health department gives much valuable information as to staff, apparatus and cost. As regards the choice of the source of the radiation, there are many enthusiastic adherents both to the mercury vapour lamp and to the various arc lamps. We cannot agree that the former is alone the ideal type. The greater part of the book, however, is applicable to work with other types. We entirely agree with Dr. Ferguson's statement that actinometers do not help much in deciding the difficult question of dosage. We have found the only reliable method of determining the dose for any patient is that described, exposing small areas of skin to increasing exposures at the first sitting. We agree also that pigmentation is by no means a necessity for, nor a guide to, good results. The author's remarks on cataract are interesting, and his reference to Burge's work significant, so that we feel grateful for his warning as to protection of the eyes of the operator of the lamp. The description of illustrative cases is most instructive and helpful. There are a good bibliography and index. The book is well printed, on good paper, has 38 excellent illustrations, and is, in short, the most helpful work on the subject we have yet met.

Handbook of Medical Electricity and Radiology. By J. R. Riddell, F.R.F.P.S. Pp. xv., 239. Illustrated. Edinburgh: E. & S. Livingstone. 1926. Price 8s. 6d.—This handbook should prove most useful both to student and to practitioner, who wish to have an account, up to date, concise and on the whole accurate, of those physical agents which are employed in diagnosis and treatment, and which are generally found grouped together in the X-ray and electrical department of a hospital. After three opening chapters on electro-therapeutics

and the elementary physics of X-ray technique, the major part of the book is devoted to a clearly-arranged and exceptionally well illustrated group of chapters on X-rays in diagnosis and treatment. Such recent methods as lipoidol bronchoscopy, pyelography, and cholecystography are all considered. There follow two chapters on X-rays and radium in treatment, and the book concludes with brief sections on light therapy and the use of carbon dioxide snow. In spite of a few inaccuracies and several debatable points, this handbook achieves its purpose and can be recommended.

Invalid Diet. By Dorothy Morton. Pp. 98. London: Wm. Heinemann Ltd. 1926. Price 5s.—Among the many smaller publications issued for the use of doctors and nurses this book holds a unique place. Few people can think at a moment's notice of a variety of menus suited to special cases of illness, and there is a tendency to repeat one or two classic dishes of "light diet" *ad nauseam*. The young private practitioner equally with the young private nurse will find this book invaluable.

A Handbook for Nurses. By J. K. Watson, M.D. 8vo. Pp. xvi., 802. 197 illustrations, 4 coloured plates. London: Faber and Gwyer. 1926. Price 7s. 6d.—The nursing world has always had a very high opinion of this publication. The author seems able to see the nurses' point of view much more clearly than many medical men who write for the instruction of nurses. This new edition is very comprehensive, the anatomy and physiology section is clear and simple, and the diagrams are good; the arrangement of many facts in tabular form is most convenient, and the coloured illustrations of the rashes in infectious fevers are very useful. The lists of instruments—also illustrated—required for different surgical operations are very helpful for junior nurses, and the new chapter on dietetics is a great asset in these days when the patient's diet occupies such an important place in the treatment of both medical and surgical cases.

First Steps in Nursing. By E. Margaret Fox, R.R.C., S.R.N. Pp. 140. London: The Scientific Press Ltd. 1924. Price 3s.—*First Steps in Nursing* is a very useful volume for the young probationer to study. It is particularly adapted for the use of probationers in nursing homes, small hospitals and institutions where little practical or theoretical instruction is given during the period of service.

Editorial Notes.

Sir George Wills's Resignation.

It is with very deep regret we learn that Sir George Wills has resigned the Chairmanship of Council of the University of Bristol, a position he held for many years, devoting to it unremitting attention, time and energy. Sir George Wills's services to education are too well known to need mention here: they are only equalled by his princely generosity, permanent memorials of which we have in our University and its kindred institutions. We are glad to know that he still remains a member of Council, and trust he will long be spared to give it the benefit of his advice and experience.

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Editorial Committee.

Several changes have occurred in the Editorial Committee consequent upon the resignation of Dr. P. Watson Williams (to which we referred in our Summer issue) and that of Mr. J. Lacy Firth, who has been Reporter of the Society's proceedings and in charge of book reviews for many years. His work has been of great service to the *Journal*, and his resignation is much regretted by his colleagues. Dr. J. A. Nixon has been appointed Editor, Dr. Carey Coombs Assistant Editor, Mr. Hey Groves continues as the *Journal's* surgical adviser, and the vacancy on the Committee is filled by Mr. A. E. Iles, who becomes a member *ex officio*

as Treasurer of the Medico-Chirurgical Society, a newly-formed office to which he was elected at the Annual Meeting in October. Henceforward the finances of the Society and the *Journal* will be in the hands of one officer, the Treasurer, instead of being dealt with separately by the Secretary of the Society and the Editorial Secretary. There can be little doubt that this change will be an advantage to the Society as well as to the *Journal*. The arrangement is not entirely new, as for a short time the offices of Secretary and Editorial Secretary were vested in one individual. The increased membership and activity of the Society rendered it impracticable to merge the two offices again, so a Treasurer was appointed, relieving both Secretaries of an arduous part of their duties. The President of the Society (Dr. A. L. Flemming) has consented to continue as Editorial Secretary, a combination of offices held once before by Mr. James Taylor in 1906, but his experience as manager is indispensable at a time when the Editorial Committee has undergone so many changes.

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Queen Alexandra Memorial Hospital, Weston-super-Mare.

The success of Mr. Henry Butt's efforts to raise sufficient funds to enlarge the Weston-super-Mare Hospital deserves the warmest praise. The foundation stones of the new Queen Alexandra Memorial Building were laid on Armistice Day, and the whole town assisted in the processions and assembly which demonstrated the satisfaction and pride which the town feels at the prospect of possessing a modern and well-equipped hospital commensurate with its growing needs. The cost of the new building is

estimated at £40,000, and of this sum £30,000 has already been subscribed in response to the President's persuasive appeals. There can be no question that the remaining £10,000 will be readily forthcoming. Such a development of its hospital was urgently needed at Weston, and we heartily congratulate the town on its achievement.

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Re-opening of the Wellcome Historical Medical Museum.

On October 14th the Wellcome Historical Medical Museum, which had been closed for some months for re-arrangement, was re-opened by Sir Humphry Rolleston, Bart. This museum is not so well known as it deserves to be, for it contains an unrivalled collection of rare objects, pictures, sculptures, manuscripts and early printed books illustrating the evolution and practice of medicine and allied sciences from prehistoric times. One of the most interesting sections deals with primitive medicine, surgery and the healing arts amongst savage and semi-civilised peoples of to-day. In another section of the museum are the memorial collections of articles used by or associated with pioneers of medical progress, such as Edward Jenner's original manuscripts and instruments, and a portion of the "Lister Ward" removed from the Glasgow Infirmary. The museum was founded by Mr. Henry S. Wellcome, and is the result of collections made by him during many years, which he offered as the Museum of the Section of History of Medicine to the Seventeenth International Congress of Medicine held in London in 1913.

The Wellcome Museum, which is situated at 54a Wigmore Street, is of immense value to research

workers, students and others interested in the subjects with which it deals. Medical practitioners and students are admitted to the Museum without charge. The Conservator, Mr. L. W. G. Malcolm, was formerly Assistant Curator at the Bristol Museum, and his experience as an ethnologist has been of inestimable service in many of the alterations and improvements that have been made, more especially in the Hall of Primitive Medicine, where the gradual rise of scientific thought from folk-lore and magic can be traced in a series of exhibits gathered from all ages.

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Annual Medical Dinner.

The Annual Dinner of the Bristol Medical School was held on Thursday, December 2nd, in the Victoria Rooms. The chair was taken by Professor E. Fawcett, F.R.S., Dean of the Faculty of Medicine, and the guest of the evening was Professor J. T. Wilson, F.R.S., of Cambridge University. The dinner was attended by 150 past and present students and members of the staff. After the dinner a most successful reception and dance was given by the wives of the staff. This was the first occasion on which the dinner and reception had been held in the Victoria Rooms, now the home of the University Union, and the two festivities have never been more enjoyably combined.

Meetings of Societies.

Bristol Medico-Chirurgical Society.

THE Annual Meeting was held in the Society's room at the University on Wednesday, October 13th. The President, Mr. T. Carwardine, proposed from the chair the name of Dr. P. Watson-Williams for election to the Honorary Membership. He knew that he need not remind the Society how great was the debt of gratitude they owed the candidate. His editorship of the *Journal* had embraced the very difficult period of the war and the succeeding years. Those who knew the inner history of the Society realised that it was owing entirely to the personal devotion of the Editor that the *Journal* had been able to survive those difficult times, and were cognisant of the great amount of time and energy devoted to their service. The proposal was carried by acclamation, and Dr. P. Watson-Williams was elected an Honorary Member of the Society. Mr. Carwardine then vacated the chair in favour of Dr. A. L. Flemming, the incoming President.

Dr. Flemming delivered his Presidential Address on **"Anæsthesia,"** to be published in the next issue.

Dr. P. Watson-Williams having entered, the President said that he regarded it as particularly grateful that his first official duty was to inform Dr. Watson-Williams of his election to Honorary Membership, and to welcome him in the name of the Society. This represented the highest honour the Society could do one of their number. It was reserved for those only to whom the Society could make no other gesture of recognition, and that it was sparingly bestowed was evidenced by there being now only four Honorary Members. He hoped that Dr. Watson-Williams would long enjoy his Honorary Membership.

Dr. P. Watson-Williams thanked the Society for the honour they had done him.

The Secretaries' report and balance sheets were presented and accepted, and the following officers were elected :—

President-Elect—Dr. R. S. S. Statham ; *Hon. Secretary*—Mr. W. A. Jackman ; *Hon. Treasurer*—Mr. A. E. Iles ; *Committee*—Mr. F. Lace, Dr. J. O. Symes, Dr. D. C. Rayner, Mr. C. F. Walters, Professor E. Hey Groves, Dr. W. V. Wood, Dr. H. L. Ormerod ; *Library Sub-Committee. Hon. Medical Librarian*—Dr. C. K. Rudge.

It was resolved that a letter of sympathy be sent to Dr. Rudge, who was ill.

The alterations to Rules 2 and 3, passed at the last meeting, were confirmed, this completing the confirmation of the new Rules of the Society.

November 10th, 1926.

DR. A. L. FLEMMING, President, in the Chair.

MR. E. R. CHAMBERS showed a case of carcinoma of the uveal tract in a woman of 55, of four months' duration. An exactly similar growth had been removed from the same site five years ago. He proposed to treat with radium.

DR. A. D. FRASER showed specimens of endometrioma.

MR. A. W. ADAMS read a paper on **"The Treatment of Congenital Club Foot."**

He pointed out the differences between this condition and the deformities consequent on paralysis, spastic or flaccid. He proposed to speak particularly of congenital talipes equinovarus, the commonest variety. The ætiology was unknown, but he inclined to the old theory put forward by Hippocrates and by Galen, that deficiency of the liquor amnii allowed pressure on the fœtus. He did not think that the theory of arrest of development could account for some of the varieties. The incidence was greatest among males; it was said to show a familial tendency, but this was found in two cases only of his series, who were brothers. There was a tendency to associated deformities, as illustrated by one case shown, with web fingers, ankylosed elbows and wrists and other joints. The condition tended to affect both feet, and in his series this was found in half the patients. The usual deformity found at birth was shown by means of photographs and diagrams. Two factors must be recognised: rotation inwards on an antero-posterior axis brought the os calcis up under the internal malleolus, rotation inwards on a vertical axis at the mid-tarsal joint brought the forepart of the foot pointing inwards and the sole backwards. The tendons and ligaments on the inner side of the ankle-joint were shortened. The deformities resulting in later life in untreated cases were demonstrated by photographs.

In treatment two points were essential to success: (1) Early treatment, beginning at one month if possible, when the tissues were pliable and the bones relatively plastic, (2) Regular, prolonged and continuous treatment.

It was waste of time to attempt treatment on manipulative lines unless the parents realised that for success they must co-operate with the surgeon. For several weeks treatment

aimed at reposition, for some months at retention, and for some years at education. The first step is to secure the reposition of the astragalus ; it is brought about by manipulation around the antero-posterior axis. The astragalus is forced in under the tibia, and the os calcis is drawn downwards and outwards under the astragalus. In addition to forced movements by the surgeon the foot is moved as far as possible in the correct position by the nurse several times a day, being held there for a few minutes. When the posterior part of the foot was rotated the anterior part was turned outwards on a vertical axis. Slight over-correction was the aim. In all cases some fibres of the deltoid ligament had to be divided, in many part of the inferior calcaneo-scaphoid ligament, and in few was tenotomy needed. A diagram showed how a roll of stockinette might be used to avoid bruising. As soon as the foot could be brought well out, it was put up in plaster for several weeks, with changes and manipulations once a fortnight. The tendency for the plaster to fall off a fat leg and foot was met by carrying it up over the knee, or by incorporating strapping. The next step consisted in tenotomy of the tendon Achillis ; without this, attempts to correct equinus would stretch the plantar ligaments. The over-correction should not be too great. A wooden sole plate was used with strapping to retain the foot in the over-corrected position. Movements and massage were continued at regular intervals ; this was the difficult time, for parents saw the foot in a good position and wished to discontinue attendances which had become wearisome. At eighteen months a malleable splint down the back of the leg and along the sole was employed, fitted with a toe-plate to resist varus. The child was encouraged to walk, but wore the splint day and night ; a small overshoe was used with the splint. The regime of massage and movements was continued long after the splint could be discarded ; by the age of three the child could learn simple exercises and so co-operate in treatment. In some cases, however, iron supports were needed for several years. In others, those which came late for treatment, cuneiform osteotomy was required. The only absolute bar to success was failure to attend the surgeon regularly for the necessary period of several years. This might be interrupted by a variety of causes—illness of parents, patients or brothers and sisters, a new baby, poverty, or, most exasperating of all, stupidity or carelessness of parents might vitiate the results of months of work. Long treatment in plaster seemed to interfere somewhat with the nutrition of the limb. Neither this nor some degree of flat foot, which was

not rare, appeared to cause the patients any trouble. There was a tendency to hallux varus when the child began to walk without splints, and in some cases an inward twisting of the tibia; osteotomy of the tibia might be needed, but had not been employed for any of the cases shown.

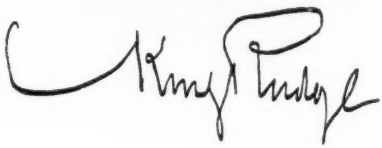
In conclusion, Mr. Adams classified the results obtained with thirty-three feet in tabular form, to show how regularly results less than "good" were associated with irregular attendance. Eight cases were shown to illustrate the later stages of treatment, and many photographs to demonstrate the application of various forms of retention apparatus.

Professor E. W. Hey Groves congratulated Mr. Adams on his very valuable paper. He agreed that the greatest difficulty in treatment was to secure the efficient co-operation of parents. He thought that sufficient emphasis had not been given to the correction of the malposition of the os calcis. He had found that reposition in a small fat foot was not easy, but thought failures were often due to this part of the deformity not having been corrected. Where the foot looks inwards he advised osteotomy of the tibia. Tarsectomy gave excellent immediate results as regards reposition, but the after-treatment needed to be just as careful and prolonged, and the final result was not so good as with manipulative methods. He particularly admired the sole piece used by Mr. Adams.

Mr. H. Chitty agreed that the displacement of the os calcis was the most difficult part of the deformity to reduce. He found plaster splints very difficult to retain in position. He used a small internal malleable splint. In late cases he took out a wedge on the outer side, to correct the heel, and found the remaining correction easy.

Mr. E. Watson-Williams noticed that the first case shown and several of the photographs had the second or third toe pushed up out of line, so as to lie on the dorsum of their neighbours. He asked whether this disappeared of itself later, what was required to correct it if not, and whether it was connected with the tendency to hallux adductus.

Mr. W. A. Jackman admired Mr. Adams's splints, and used them regularly. He had obtained very good results in seven cases out of eight with splints, not using plaster; he asked Mr. Adams's advice as to treatment in an eighth case, $2\frac{1}{2}$ years old, that had not improved in spite of the most careful and intensive treatment since six weeks old. All his cases were bilateral.



The PRESIDENT asked whether the almoner's department had been used to follow up the cases. He added that the wealthy failed to get the best treatment, as well as the very poor; they were inclined to go from one surgeon to another, and in consequence continuous treatment by one method was lost. He believed this deformity was related to defective heredity, such was relatively common in remote and isolated districts, and which showed itself in mental as well as physical abnormalities.

MR. ADAMS in reply said he recognised that the posterior deformity was the most difficult to treat, and referred to the passages and diagrams in his paper which dealt with this. This correction can be made at the same time as the abduction, and it is not difficult to overdo it. In favour of plaster instead of splints over at the early stage, he thought splints needed daily attendance. He admitted that the following of cases would be easier if there were an officer specially for this service. Great efforts were often needed to keep some parents attending regularly.

E. WATSON-WILLIAMS.
W. A. JACKMAN, *Hon. Sec.*

Obituary.

CHARLES KING RUDGE, M.R.C.S., L.R.C.P.

CHARLES KING RUDGE, whose death occurred on October 24th, 1926, was born at Haverfordwest, Pembrokeshire, in 1846. He came of an ancient Staffordshire family, a branch of which settled in Gloucestershire in the seventeenth century. In 1867 he entered as a medical student at the Bristol Royal Infirmary, where he gained the Suple Gold Medal for Medicine. As a student he attracted the attention of Dr. E. Long Fox and Dr. Brittan, who spoke in the highest terms of him. After obtaining the qualifications of the Conjoint Board in 1869, he was appointed Surgeon to the Bristol Dispensary and held that post for the full term of twelve years. In 1875 he started private practice in Whiteladies Road, Clifton, and continued to practise in the same house for fifty years. In 1871 Mr. Rudge married Louisa Maria, younger daughter of Richard Hughes, F.R.C.P., who predeceased him. He left issue, five

sons and three daughters, to whom we offer our sincere ympathy.

Of a singularly quiet and unassuming disposition, Mr. Rudge was none the less full of varied interests and ardent in public work of many sorts. To the Bristol Medico-Chirurgical Society he gave twenty-four years of unsparing labour in a capacity which would perhaps have attracted few others among its members. When Mr. L. M. Griffiths resigned the post of Honorary Librarian to the Bristol Medical Library in 1902 Mr. Rudge consented to succeed him, and accepted re-election every year up to October, 1926. The position was not one to bring its holder into prominence, although the value to the Society and to University College, Bristol, was incalculable. Mr. Rudge was not only fond of books for their own sake ; he took an intense pride in the library which he ruled so well. He knew, of course, its history intimately ; it would be almost true, perhaps, to say that he knew the provenance of every single volume. He could point out which were held on loan from the Infirmary, or the Hospital, which had been purchased by the College, which given by the Society, and, in his eyes best of all, which had belonged to the old Bristol Medical Library. Mr. Rudge as Honorary Librarian had the anxious task of seeing his precious books moved from the present Senate Chamber to the old Blind Asylum, thence to the Racquets Courts of the Drill Hall, and finally into the worthy library designed by Sir George Oatley in the new buildings of the University, which we owe to the generosity of the Wills family.

How carefully Mr. Rudge protected the books from damage in each of these removals the state of the library shelves can testify. It was no small satisfaction to him when at last the whole collection with its multiple ownership was entrusted to the sole charge of the University. But when the gift to the University was complete he experienced for a short time one fearful misgiving. Had he helped to bury the last trace of the Bristol Medical Library ? The University, not wholly realising perhaps all that the gesture implied to Mr. Rudge, resolved that the library should be known as the Bristol Medical Library in

the University of Bristol, and invited him to continue as the Honorary Medical Librarian to the University.

In 1922 the Bristol Medico-Chirurgical Society had elected Mr. Rudge to be an honorary member, the only distinction by which his services could in any measure be acknowledged, but in his inmost heart it seemed that the retention of the name of the Bristol Medical Library filled him with greater satisfaction than any personal honours could have done.

Beyond the Medical Library Mr. Rudge still found time and energy to spare outside his busy hours of practice. He had joined the Bristol Naturalists' Society in 1870, and held at various times the offices of Secretary, Librarian, Vice-President and President. He seems to have delivered no less than three presidential addresses to the Society on the occasions when he was re-elected to the Chair of President, and he contributed to the discussions three papers: "British Shore Fishes and their habits" (1888), "The Mammals of the Bristol District" (1908), and "Food of Animals and stratagems employed in obtaining it" (1913). He was a member of the Bristol Microscopical Society and of the Bristol and Gloucestershire Archæological Society.

It is impossible, however, to write of Mr. Rudge's life and activities without referring to him as a convinced and liberal-minded Churchman. He was a life-long supporter of the Church Missionary Society, and for many years acted as local Honorary Secretary to the Medical Branch of that Society, keeping in touch with the many Medical Missionaries belonging to the C.M.S. He was also a member of the Cathedral Branch of the C.E.M.S.

It often was remarked with surprise that Mr. Rudge had never been elected President of the Medico-Chirurgical Society. He had, in fact, declined nomination several times; he used to declare at Committee meetings, when asked if he would allow himself to be nominated for President-elect, that it was quite enough work for one man to be Librarian, and he would not give up that office in order to become President. There was something more than a mere love of books (though he possessed that in a marked degree) that kept Mr. Rudge to his librarianship

so firmly and so long; he was keenly alive to the importance of a good library being always at the service of every student and practitioner of medicine. His efforts were crowned by the satisfaction of knowing that the Bristol Medical Library ranked among the leading medical libraries of the kingdom.

His loss will be felt deeply wherever he was known, and particularly by the members of this Society, who owed so much to his labour.

EDWIN WELSE COATHUPE, M.R.C.S.

THE death of Mr. Edwin Welse Coathupe at the age of 89 at Boscombe, Bournemouth, on November 23rd, 1926, recalls to memory one of the most interesting careers in the history of the Bristol Medical School. Born in 1837 at Birdcombe Court, Wraxall, he was a son of Mr. Charles Thornton Coathupe, who was one of the Charity Trustees for Bristol, and also a representative in the City Council. His early tuition was received at the Grand Ducal College of Darmstadt, and subsequently he was educated at the well-known school in Clifton conducted by the Rev. J. Exley, M.A. He afterwards entered as a pupil at the Medical School and Royal Infirmary at Bristol, obtained the diploma of membership of the Royal College of Surgeons in 1859, and almost immediately accepted the appointment of Assistant Surgeon to the Tredegar Iron Works, which he held for three years.

As a student in Bristol and in London, whenever he had the chance he went about with the police, and especially when there was a difficult case he was admitted among the detectives, and actively joined in their work. He was always held by them in high esteem, and at an early age he gave up his work in Tredegar to join the Metropolitan Police as a constable. He was at once appointed into the inner circle of the Metropolitan detective force, consisting of some dozen members only.

After three years' police service in London he returned to Tredegar as chief surgeon at a salary of £1,000 a year. A year later he retired from the practice of medicine in order to become deputy Chief Constable of Manchester, and in 1876 Bristol was

very fortunate in selecting him from 122 candidates as Chief Constable, and in retaining his very valuable services for many years.

Mr. Richardson Cross, who knew Mr. Coathupe very well, writes: "Soon after I came to Bristol (1878) the death of Mr. Tibbits, one of the Surgeons to the Infirmary, made a vacancy for the post of Surgeon to the Police, and to this I was appointed. The Chief Constable, Mr. Coathupe, then became intimately known to me. I held the highest possible regard for him in every way, both in his private life and for the high standard of his public work. Everyone looked up to him, the Watch Committee, the public, and the police themselves. He expected everyone in the Force to work up to his own standard—the best he could do. His desire was to improve each man, and also the whole body of the Force. I remember in physique we had got such a fine body of men, that a special effort to send a body of high-class constables to China resulted in a draft from Bristol of, I think, fifty of our men *en bloc*. He was interested in the medical men and in their work, and he often attended our meetings when anything came on of especial interest. But the detection of crime and the capture of the criminal was his absorbing interest, and he told me many stories of his adventures with the police in London and of his thrilling personal experiences."

Under his rule our police force doubled in number and its constitution was entirely remodelled. It was upon his initiative that the city was divided into divisions, the rank of Superintendent created, the Police Fire Brigade established, and the River Police brought into existence. He also introduced the general use of police vans. Under Mr. Coathupe's control the reputation of the force was steadily advanced, a fact which was shown by the number of men trained under him who secured high positions in various parts of the country.

Upon his retirement in 1894 he was presented with an address and £260 by the Justices of Bristol.

Thus, after 30 years' police service he sought well-earned rest. For a time he lived abroad, principally in Rome, but latterly he made his home at Bournemouth, where he died.

He had one child, a daughter, whose death in her twenties was a great sorrow to him.

His funeral took place at Wraxall, near his father's old home. His widow survives him and was present at his funeral. He had outlived most of his friends, but some of his old friends' children attended his funeral, together with several of his old superintendents in the police force, who had come long distances to pay their tribute to his memory.

We offer to Mrs. Coathupe our deep sympathy in her loss, together with the assurance that his name will not be forgotten in the list of those who have brought honour to our profession and our School.

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M.B., CH.B. (*Part II.*).—*Second Examination. Pass :* J. L. W. Davies.

DIPLOMA IN DENTAL SURGERY.—*Supplementary Preliminary Science Examination for Dental Students. Pass : In Biology only* (*Completing Examination*) *:* T. A. A. Eaves, K. V. M. Taylor.

L.D.S.—*First Professional Examination. Pass. In Anatomy and Physiology* (*Completing Examination*) *:* C. R. H. Edwards, L. W. G. Jones. *In Anatomy and Physiology :* (Miss) B. J. Shapland.

L.D.S., R.C.S.—*First Professional Examination. Part I.* (*Dental Mechanics*) *:* R. G. Boodle. *Part III.* (*Anatomy and Physiology*) *:* R. G. Boodle, C. Haskins, (Miss) M. E. Minton, R. A. Phillips, J. P. Price, L. Symonds.

APPOINTMENTS.

Bristol Royal Infirmary.—Honorary Surgeon : H. Chitty, M.D., M.S. Lond., F.R.C.S. Assistant Physician in charge of Ante-Natal Department : Lily A. Baker, B.A., M.B., B.Ch. Dubl., F.R.C.S.I. Honorary Obstetrical Registrar : H. L. Shepherd, M.B., Ch.M. Bristol.

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